### Lesson 12 Practice Problems

1. In this hanger, the weight of the triangle is $x$ and the weight of the square is $y$.
* 
	1. Write an equation using $x$ and $y$ to represent the hanger.
	2. If $x$ is 6, what is $y$?
1. Andre and Diego were each trying to solve $2x+6=3x−8$. Describe the first step they each make to the equation.
	1. The result of Andre’s first step was $-x+6=-8$.
	*
	1. The result of Diego’s first step was $6=x−8$.
2. Match each set of equations with the move that turned the first equation into the second.
	1. $6x+9=4x−3$
	$2x+9=-3$
	2. $-4\left(5x−7\right)=-18$
	$5x−7=4.5$
	3. $8−10x=7+5x$
	$4−10x=3+5x$
	4. $\frac{-5x}{4}=4$
	$5x=-16$
	5. $12x+4=20x+24$
	$3x+1=5x+6$
	6. Multiply both sides by $\frac{-1}{4}$
	7. Multiply both sides by $-4$
	8. Multiply both sides by $\frac{1}{4}$
	9. Add $-4x$ to both sides
	10. Add $-4$ to both sides
3. What is the weight of a square if a triangle weighs 4 grams?
* Explain your reasoning.
* 
1. Here is a balanced hanger diagram.
* Each triangle weighs 2.5 pounds, each circle weighs 3 pounds, and $x$ represents the weight of each square. Select *all* equations that represent the hanger.
* 
	1. $x+x+x+x+11=x+11.5$
	2. $2x=0.5$
	3. $4x+5+6=2x+2.5+6$
	4. $2x+2.5=3$
	5. $4x+2.5+2.5+3+3=2x+2.5+3+3+3$



© CC BY Open Up Resources. Adaptations CC BY IM.